ATTACHMENT 8: RESPONSES TO COMMENTS ON THE FEIS

8.1. Responses to Comments on Appendix S, Landscape-Scale Mitigation

Comment: *Appendix S does not recognize/infringes upon valid existing rights. Compensatory mitigation is inconsistent with the terms of federal oil and gas leases. BLM cannot require compensatory mitigation from federal oil and gas lessees.*

Response: Text has been added (Attachment 6 page 1) to clarify that any implementation of mitigation measures and/or compensatory mitigation would occur consistent with valid existing rights. The use of compensatory mitigation will not affect lease rights, and would not be added as a lease stipulation. Text has also been added to clarify that avoidance and minimization are mitigation measures; that only when these have proven insufficient and unacceptable residual impacts are anticipated would compensatory mitigation be considered, and only as a result of impacts that may warrant the use of compensatory mitigation following site-specific environmental analysis. Any mitigation measures would be attached as COAs to the permit or as RDFs of the preferred alternative in the site-specific NEPA analysis. If the project could not be relocated to avoid the impact, or minimized to reduce the impact to an acceptable level using existing as well as other Best Management Practices and other methods of avoidance and minimization, and rectification, to reduce the impact to an acceptable level, then compensatory mitigation would be considered.

Comment: *The BLM must recognize that it lacks any authority to require compensatory mitigation for impacts to non-federal surface when surface locations are sited off of federal leases.*

Response: Text has been added (Attachment 6, page 3) to clarify that only federal actions would trigger the need for a site-specific environmental analysis that may (or may not) identify the need for compensatory mitigation. The BLM recognizes that only actions that would occur on BLM-managed lands would trigger the need for site-specific environmental analysis. The BLM has no authority to require compensatory mitigation for impacts to non-federal surface when surface locations are sited off of federal leases.

Comment: *Appendix S is inconsistent with the BLM's Greater Sage-Grouse Resource Management Plan and the State of Wyoming's Core Area Strategy…Neither the BLM's RMP Amendments nor the Core Area Strategy requires compensatory mitigation to offset all surface disturbance in greater sage-grouse habitat. Appendix S can be interpreted as requiring compensatory mitigation because of the possibility that core area thresholds will be exceeded, regardless of whether thresholds have actually been exceeded.*

Response: Some adverse or unavoidable impacts to resources may be acceptable, provided that those impacts do not exceed established resource and value objectives identified in the Rawlins RMP. The BLM is not proposing that all disturbances in greater sage-grouse habitat be offset. Rather, the CD-C FEIS identifies that residual impacts to sage-grouse may occur, due to valid existing rights, that may affect the RFO's ability to achieve the above referenced objectives in the Rawlins RMP. If this occurs, as identified on a site-specific basis, compensatory mitigation may be considered. In addition, the ARMPA requires the BLM to attain net conservation gain to disturbances in PHMA.

Text has been added (page 1) to clarify that compensatory mitigation would only occur if avoidance, minimization, and rectification measures would be insufficient and residual impacts would occur. The BLM would have to demonstrate, at the APD and site-specific level, that residual impacts were present, that they could not be sufficiently mitigated through other techniques, and thus compensatory mitigation would be warranted. In addition, the land use plan objectives from the Rawlins RMP have been added to provide additional context (pages 6 and 7 of Attachment 6) and demonstrate consistency with the ARMPA and Rawlins RMP.

Comment: *Appendix S is inconsistent with the State of Wyoming's mitigation strategy.*

Response: The State of Wyoming's mitigation strategy supports the use of compensatory mitigation when avoidance and minimization measures are insufficient (Executive Order 2015-4, Attachment H). The State of Wyoming recognizes that compensatory mitigation is a strategy that should be used when avoidance and minimization measures are inadequate to protect core population area greater sage-grouse. In the Letter from Governor Matthew H. Mead to Mary Jo Rugwell et al., it is stated that the basic principles of this conservation effort [maintenance of the Greater Sage-grouse] are avoidance, minimization, and [compensatory] mitigation – with [compensatory] mitigation only employed where avoidance and minimization are either inadequate or impossible. The introduction to Attachment 6 presents the mitigation hierarchy and clarifies how the BLM would implement this hierarchy.

In addition, the Wyoming Greater Sage-grouse Compensatory Mitigation Framework presents a process similar to the one presented by the BLM in Appendix S as a method to calculate debits; this has been identified as another example process to the Attachment 6 (page 18). The state of Wyoming proposes this formula as a means by which compensatory mitigation obligations may be calculated based upon location, functionality, indirect impacts, and size of both the credits and the debits. The formula presented in Appendix S (Attachment 6) incorporates the area of residual impacts (direct and indirect), and takes into account the quality of the habitat and spatial characteristics of the resource. In order to reduce confusion, Appendix S/Attachment 6 has been updated to clarify this (page 18).

The BLM and the WGFD have different management mandates. The BLM adheres to the management objectives identified in the applicable land use plan, and the BLM is required to address impacts using environmental analysis directed by NEPA and must use the best available science and knowledge in the NEPA analysis. The BLM must determine the indirect effects of any actions, on a site-specific basis, that may occur on BLM-administered lands using best available science and knowledge and cannot rely on an arbitrary determination of effects. The BLM and the WGFD will continue to work together towards consistent implementation of compensatory mitigation; however, the BLM must analyze, account for, and determine the indirect effects of a project. Language has been added in Attachment 6 that states that the BLM and WGFD will continue to work together to determine appropriate debits (page 7-8).

Comment: *The equations are not supported by science. Mitigation requirements are not commensurate with impacts from development... Spatial multipliers wildly inflate mitigation obligations without supporting science…Mitigation requirements are not commensurate with impacts from development.*

Response: The equations presented in Appendix S were developed in coordination with the Governor's Office and the Wyoming Game and Fish Department. In the Wyoming Greater sage-grouse Mitigation Framework attached to the Letter from the Governor to Mary Jo Rugwell et al., essentially the same equation is presented. The mule deer equation was developed in coordination with the Wyoming Game and Fish Department and is based on recommendations from that agency (WGFD 2010). Clarifying language has been added (Page 18) to indicate that these are examples of the types of equations and ratios that may be used to calculate debits. These equations will be updated based on advancing science and in cooperation with the state of Wyoming and the WGFD (page 18)

The direct impacts associated with the development are taken into account, as are the quantified indirect impacts. Depending on the value of the habitat, the direct and indirect impacts may vary in comparison to the easily identifiable impacts of the project (i.e. surface disturbance associated with well pad construction). The indirect effects of noise, disruptive activities such as increased vehicle traffic, and other activities, are quantified using the sigmoidal decay curve presented in the Habitat Quantification Tool (HQT) proposed by the Wyoming Conservation Exchange. The greater the value of the habitat, the greater the requisite compensatory mitigation. If operators are unable to avoid and minimize impacts to an acceptable level, and result in an impact in a high value habitat (as defined by the Wyoming ARMPA), then the mitigation cost would be commensurate with the impact in that high value habitat.

The BLM should determine the amount of compensatory mitigation that is commensurate to the unacceptable residual effects incurred as a result of development and also achieves the mitigation standard. In some cases the requirements for compensatory mitigation would equal the impacts from disturbance; in other cases, depending on the value of the habitat and the level of residual impact, the compensatory mitigation amount could be higher than the actual impact from development. The BLM will continue to refine these equations, in coordination with the WGFD, to develop the most accurate determination of debits.

Comment: *The BLM arbitrarily requires mitigation of activities in unsuitable habitat…BLM should not require any compensatory mitigation when activities occur in unsuitable habitat [because impacts do not occur to the species when the habitat is unsuitable for species' use].*

Response: The use of the word unsuitable is not intended to address habitat quality, but rather to apply a discount to proposals that occur within PHMA that use existing disturbances. For example, the construction of a wellpad in suitable PHMA within 4 miles of a lek would normally be assessed a spatial multiplier of 2. However, if the proponent uses existing disturbance and does not create additional disturbance, but does create additional disruption (or creates a smaller footprint by using existing disturbance, such as an existing road or un-reclaimed wellpad), the disturbance would be discounted by applying the 0.75 spatial multiplier. The application of any spatial multiplier would depend on the site specific environmental analysis of the project, and if residual impacts that are disruptive in nature (but not necessarily surface disturbing in nature) are identified, and determined to warrant compensatory mitigation, then the debit would still need to be calculated. The use of the term "unsuitable" applies to transitioning habitat, or existing disturbed locations and allows that a discount to the total debit be applied. The term unsuitable does not refer to overall habitat quality. This has been clarified in Attachment 6 (page 18), with references to the Governor's Executive Order 2011-5.

The same assumption applies to the definitions of suitable and unsuitable habitat for the mule deer and pronghorn section of Appendix S. These have also been clarified.

Comment: *Appendix S fails to describe how mitigation credits will be calculated…the BLM does not consider availability of mitigation credits or associated costs.*

Response: Appendix S does not describe how mitigation credits would be calculated because the BLM does not serve as a crediting entity. The Conservation Bank Review Team, an interagency group of Federal, State, Tribal, and/or local regulatory and resource agency representatives, oversees the establishment, use, and operation of a conservation bank, and the value of the credits therein. This group would approve credits from various bank or exchange systems; proponent sponsored projects (or other types of credits) would be reviewed and approved by this team. The BLM does not propose to dictate to the operators how debits should be offset. Please see the Governor's Wyoming Greater Sage-Grouse Mitigation Framework for more information on credit calculation. In order to clarify the BLM's role in the calculation of credits, text has been added to Appendix S/Attachment 6 on page 12.

The availability of mitigation credits would only be of concern when the compensatory mitigation mechanism that is identified and agreed upon is based on mitigation banks or exchanges. These are not the only mechanisms that the BLM considers appropriate for compensatory mitigation. Other compensatory mitigation measures include fence replacement, habitat improvement projects, road closure and rehabilitation, among other possibilities. There is unlikely to be any deficit of credits across a landscape.

Comment: *BLM does not consider the cost [of implementing Appendix S] to the operators.*

Response: The cost to the Operators of implementing compensatory mitigation, when and if it's needed or required, would be calculated and disclosed in the step down, site-specific environmental analysis that would occur when an individual permit or permits are received by the BLM. The cost of mitigation in

terms of avoidance, minimization, and rectification, etc., are analyzed in the socioeconomic impacts analysis of the FEIS, Chapter 4, Section 4.15. The potential cost of implementing compensatory mitigation via debits and credits cannot be assessed at the programmatic level because there is no certainty regarding the location of impacts. The final determination that compensatory mitigation is warranted is dependent on the location and severity of the impact; the cost to operators can only be calculated on a site-specific basis and would depend on the application of other mitigation measures, including avoidance and minimization techniques. The BLM does not unilaterally assume that compensatory mitigation will occur, or will need to occur, within the CD-C project area. In order to analyze the socioeconomic impacts to Operators, a site-specific level analysis will need to occur. Text has not been revised.

Comment: *The BLM cannot require a particular compensatory mitigation mechanism…Western Energy Alliance disagrees with BLM's proposal to select the compensatory mitigation mechanisms to offset development in the CD-C project.*

Response: The BLM does not propose to select a particular compensatory mitigation mechanism. Rather, the BLM needs to ensure that any proposed compensatory mitigation is commensurate with the impacts that the mitigation would offset. The BLM would be unable to approve a proposed project if the compensatory mitigation identified were not commensurate with the impacts. The BLM has a responsibility to analyze the compensatory mitigation option/solution against the impact in order to determine if the proposed mitigation would, in fact, be appropriate to the impact and value of the disturbed habitat and would achieve the goal of the mitigation standard. If the proponent were to suggest or propose a particular compensatory mitigation mechanisms and the BLM agreed that the proposed mechanism was commensurate with the impacts, then the BLM would not need to deny or reject the proposed mechanisms, or suggest other mechanisms.

Comment: *Appendix S does not explain how mitigation standards are achieved.*

Response: The resource objectives identified in the RMP and the RMP Amendment (and thus, the mitigation standards identified in the mitigation strategy) would be achieved via the successful application of compensatory mitigation, as determined via the type of processes identified on page 18 of Attachment 6 (i.e. BLM's process or State of Wyoming's process or another similar process) or other appropriate processes. In general, to achieve a no net loss mitigation standard, the analysis must identify that the value of the mitigation proposed is equal to the value of the habitat impacted (i.e., mitigation = impact). In order to achieve the net conservation gain mitigation standard, the BLM must demonstrate in its site-specific environmental analysis that the magnitude of the mitigation is greater than the magnitude of the impact (i.e., mitigation > impact). The value of the mitigation proposed must be greater than the value of the habitat impacted to achieve a net conservation gain.

Comment: *The BLM's mitigation standards exceeds its statutory authority…The BLM does not have the authority to require compensatory mitigation.*

Response: The Rawlins RMP identifies two objectives for wildlife habitat:

- Maintain, restore, or enhance wildlife habitat in coordination and consultation with other local, state, and federal agencies and consistent with other agency plans, policies, and agreements. A full range of mitigation options will be considered when developing mitigation for project-level activities for wildlife and Special Status Species habitats; and
- Maintain, restore, or enhance habitat function in crucial winter range.

In order to ensure that crucial winter range for pronghorn and mule deer is, at a minimum, maintained in the CD-C project area, the BLM will develop mitigation that provides a no net loss standard to crucial

winter range by avoiding, minimizing, and compensating for unavoidable, residual impacts that may occur as a result of development of existing and future leases in actions that tier to the CD-C EIS.

The goal of maintaining habitat implies a no net loss standard; this does not exceed the statutory authority of the BLM but rather helps the BLM to achieve an important objective in the RFO's RMP.

The Federal Land Policy and Management Act (FLPMA) established the United States' policy for public land management, including the policy to protect ecological and environmental resources, preserve and protect certain lands in their natural condition, and provide food and habitat for wildlife (43 U.S.C. § 1701(a)(8)). To implement this policy, the Secretary is directed to "manage the public lands under principles of multiple use and sustained yield…" (43 U.S.C. § 1732 (a)), and to regulate, through easements, permits, leases, licenses, published rules, or other instruments the Secretary deems appropriate, the use, occupancy, and development of the public lands… in managing the public lands, the Secretary shall…by regulation or otherwise, take any action necessary to prevent unnecessary or undue degradation of the lands"(U.S.C. §1732 (b)).

The BLM cannot always mitigate the direct and indirect impacts from land-use authorizations to an acceptable level via traditional avoidance and minimization measures; when this occurs, the use of compensatory mitigation, in order to prevent unnecessary and undue degradation of the landscape or to enable achievement of resource objectives, may be warranted. The BLM accepts that not all adverse or unavoidable impacts can or must be fully mitigated, whether onsite or off site. The BLM agrees that a certain level of adverse impact may be acceptable; these impacts will be identified in the site-specific NEPA analysis. However, when appropriate mitigation is not sufficient and the project would result in impacts that would violate land use plan resource and value objectives, then compensatory mitigation could be warranted. In addition, FLPMA specifies that the BLM may not authorize a proposed use that would result in unnecessary and undue degradation, even if mitigation conducted outside of the area were sufficient to potentially reduce the impacts of that proposed use. There may be instances when impacts to BLM resource and value objectives are unavoidable and cannot be adequately mitigated. If the BLM is unable to meet its resource and value objectives, then impacts could be considered significant and the BLM would be required to analyze the impacts under an EIS.

The BLM must consider the application of compensatory mitigation to individual projects or authorizations in the context of the particular law, regulation, and policy applicable to that project or authorization. Any implementation of the compensatory mitigation detailed in Appendix S would occur consistent with applicable law, regulation, and policy (page 3).

Comment: *The BLM must identify the types of guarantees that will be sufficient to assure the durability of mitigation…The BLM must identify acceptable and reasonable financial assurances.*

Response: The BLM may require financial assurances to ensure that the compensatory mitigation identified by the site-specific NEPA analysis is implemented and effective. This would depend on the need for, type of, and amount of mitigation that is determined appropriate. The BLM may need to ensure that the authorized land user provides the BLM with a financial assurance (such as a performance bond) that would be sufficient to cover permit obligations concerning compensatory mitigation. Nationwide performance bonding would not be the appropriate financial instrument for ensuring compliance with compensatory mitigation obligations that may occur outside of the lease area; a separate bond would be necessary for off-lease, compensatory mitigation activities. In addition, if the use of mitigation banks or exchanges is identified as the appropriate compensatory mitigation mechanism, the BLM should ensure that these organizations exhibit financial solvency and durability sufficient to cover all compensatory mitigation actions for the life of the impact. Text has been added to clarify this in the Attachment on page 9.

Comment: *Mitigation requirements in Appendix S are not proportionate to obligations imposed on other land uses.*

Response: Mitigation is required for all authorized land uses, if the need for it is identified and consistent with applicable law, regulation, and policy. During site-specific and programmatic environmental analysis for any proposed land use on lands managed by the BLM, direct and indirect impacts will be identified and mitigation identified, including any compensatory mitigation. This is established in CEQ guidance, Secretarial Order No. 3330, *Improving Mitigation Policies and Practices of the Department of the Interior*, and the BLM's obligations under FLPMA, the National Environmental Policy Act (NEPA) of 1969, Mineral Leasing Act of 1920, as amended, and WO IM 2013-142: Interim Policy, Draft – Regional Mitigation Manual Section – 1794.

Comment: *The BLM must make it clear that if an operator implements mitigation measures to avoid and minimize impacts then compensatory mitigation will not be required.*

Response: The BLM has clarified the implementation of the mitigation hierarchy to avoid and minimize impacts prior to considering compensation on Page 1 of Attachment 6 of the ROD.

Comment: *FLPMA's unnecessary and undue degradation standard guides the limits of mitigation that the operator must comply with applicable law and regulations and prudent management and practice, and reasonably available technology. FLPMA does not require complete restoration of the disturbed resources.*

Response: The BLM is not proposing complete restoration of the disturbed resources. The BLM identifies and considers mitigation to address impacts to resources in NEPA analyses for proposed public land uses, and, as appropriate, requires mitigation to address impacts to resources. When impacts occur that inhibit the achievement of a land use plan's objectives, the BLM may determine, via the site-specific NEPA analysis, that those impacts are unacceptable and that compensatory mitigation would be necessary.

Comment: *The substantial mitigation requirements in Appendix S are not commensurate with the anticipated impacts of oil and gas development…example is disproportionate to the impact.*

Response: The mitigation requirements/debits will be dependent on the value of the habitat impacted. The higher the value of the habitat and the greater the disturbance to that habitat, the greater the requirements of mitigation will be in order to appropriately offset those impacts. If the proponent chooses to place a wellpad on existing disturbance, that avoidance measure effectively reduces the levels of residual impacts to acceptable and the need for compensatory mitigation would not occur. If a wellpad is placed within 0.6 miles of a lek, which is considered extremely valuable habitat, the BLM must determine appropriate, commensurate mitigation that effectively offsets those impacts. The formula presented as an example in the Landscape-Scale Mitigation attachment only addresses the debits that would be generated by the impact, not the credits. The conversion of debits to credits may significantly reduce the final obligation.

8-2. Responses to Other Comments on the FEIS

Comment Number	Comment	Response
1	The BLM made no effort in the FEIS to analyze and assess the emissions that would result from oil and gas consumption.	Unsubstantiated assumptions including operational costs, future regulations, process improvements, demand, and other factors would need to be considered when analyzing and assessing the impacts that could occur as a result of oil and gas consumption or the emissions of greenhouse gases that could occur as a result of downstream consumption. This information is beyond the ability of the BLM to reasonably foresee and predict. Such an analysis would be highly speculative and would provide no discernable benefit to the document and would not provide additional pertinent information to the decision maker or the public.
2	The BLM did not address downstream greenhouse gas emissions that would result from approval of CD-C.	Unsubstantiated assumptions including operational costs, future regulations, process improvements, demand, and other factors would need to be considered when analyzing and assessing the impacts that could occur as a result of oil and gas consumption or the emissions of greenhouse gases that could occur as a result of downstream consumption. This information is beyond the ability of the BLM to reasonably foresee and predict. Such an analysis would be highly speculative and would provide no discernable benefit to the document and would not provide additional pertinent information to the decision maker or the public.
3	BLM did not shed any light on the significance of the emissions in the context of global climate change.	The BLM, consistent with CEQ guidance, has estimated the greenhouse gas emissions associated with the proposed action (and the No Action Alternative) as a reasonable proxy for the effects of climate change. The CEQ guidance directs agencies to consider the effects of a proposed action on climate change as indicated by GHG emissions, and consider the implications of climate change for the environmental effect of the proposed action. The FEIS provides this in Section 4.5.7.1 on pages 4-67 and 4-68 of the FEIS for the proposed action, and compares the GHG emissions qualitatively for the action alternatives and also provides a quantitative comparison in Table 4.5-3 on page 4-53. The GHG emissions that would occur as a result of the No Action alternative are presented in Section 4.5.7.6, page 4-78. Section 4.5.7.1, also states that "it is not possible to attribute emissions of GHGs from any particular source to a specific climate impact, globally or regionally, due to the longevity of GHGs in the atmosphere."

Comment Number	Comment	Response
4	The BLM failed to use readily available methodologies to assess climate impacts, namely the social cost of carbon protocol.	The BLM believes that including monetary estimates of the social cost of carbon in its NEPA analysis for this proposed action would not be useful. Estimating the social cost of carbon is challenging as it is intended to model effects at a global scale on the welfare of future generations caused by additional carbon emissions occurring in the present. The BLM believes that including meaningful monetary estimates of the social costs of carbon would not provide additional pertinent information to the decision maker. Given the global nature of climate change, estimating the social cost of carbon would require the analysis of the impact of the project on the global market. Depending on the global demand for natural gas, the net effect of this project may be offset by changes in production in other locations. In order to complete an analysis of social cost of carbon, the BLM would need to incorporate unsubstantiated assumptions about numerous factors that would beyond the ability of the BLM to reasonably foresee and predict.
5	The agency made no effort to disclose the past, present, and reasonably foreseeable greenhouse gas emissions that would result from other BLM oil and gas approvals and other actions and activities that produce greenhouse gases.	The BLM provides estimates of emissions from existing wells in the CD-C project area (Table 4.5-3 on page 4-53 of the FEIS), as well as emissions likely to occur as a result of the proposed action in Appendix H of the Air Quality Technical Support Document. In Section 5.5.5, page 5-23, the BLM acknowledges that greenhouse gases are causing the global climate system to warm, and the amount of greenhouse gases emitted globally will determine the magnitude of climate change. However, emissions of greenhouse gases from any particular source become well-mixed throughout the global atmosphere and emissions from all sources contribute to the global atmospheric burden of greenhouse gases. It is not possible to attribute a particular climate impact in any given region to greenhouse gas emissions from a particular source. The Wyoming Basin Ecoregional Assessment that was developed a climate analysis, which included a reasonably foreseeable range of projected changes in temperature, precipitation, and hydroclimate variables for the Wyoming basin based on reasonably foreseeable future actions. Please see page 5-23 to 5-24 of the FEIS for a discussion of this assessment.

Comment Number	Comment	Response
6	The BLM must revise and/or supplement the document to ensure compliance with NEPA [regarding air quality impacts]. As written, the FEIS does not demonstrate that the BLM has prepared a sufficient analysis and assessment of impacts such that the American public can be assured that an informed and objective decision will be made.	The BLM believes that the air quality analysis provided in the FEIS and the supporting AQTSD is sufficient for the decision maker to make an informed decision regarding the CD-C project. The air quality analysis is one of the most comprehensive modeling efforts that the BLM has undertaken for fluid mineral EIS to date. The air quality analysis in this EIS uses best available science and information and in-depth modeling to estimate the air quality impacts associated with the proposed action and the no action alternative. In addition, the air quality analysis was completed in cooperation with other Federal agencies, including EPA Region 8, National Park Service, Forest Service, and the Wyoming Department of Environmental Quality. These agencies played a key role in reviewing and assessing the air quality analysis in the DEIS and FEIS. The air quality impact analysis begins on page 4-48, Section 4.5 of the FEIS.
7	BLM did not fully disclose direct, indirect, and cumulative greenhouse gas emissions, and failed to conduct any analysis and assessment of climate impacts using readily available methodologies, namely the social cost of carbon protocol.	Please see responses to Comment Nos. 4 and 5.
8	The BLM failed to adequately analyze and assess greenhouse gas emissions and climate impacts which raises well-founded concerns that the agency is not taking this information seriously or taking any meaningful steps to limit the climate impacts the climate impacts of the CD-C project.	The BLM has followed CEQ guidance for estimating greenhouse gas emissions; please see response to Comment No.3. There are currently no ambient air quality standards for greenhouse gas emissions, nor are there currently any emissions limits on greenhouse gases that would apply to sources developed under the proposed action and alternatives. There are reporting requirements under the EPA's greenhouse gas reporting program whereby the project proponents will be required to develop and report annual methane, carbon dioxide, and nitrous oxide from various sources.

Comment Number	Comment	Response
9	The BLM has inaccurately analyzed and assessed the impacts of methane emissions associated with construction and production of wells in the CD-C project area. Notably, the BLM presumed that methane has a global warming potential that is 21 times that of CO2. However, scientifically based estimates of the global warming potential of methane indicate that its heat-trapping capabilities are much higher and that the BLM underestimated total GHG emissions associated with methane.	The BLM used the EPA's Inventory of Greenhouse Gas Emissions and Sinks for this analysis as it complies with international greenhouse gas reporting standards under the United Nations Framework Convention on Climate Change, which require the use of the Global Warming Potential Values for the International Panel on Climate Change's Fourth Assessment Report. This inventory provides emissions by mass, such that CO2 equivalents can be calculated. Most national and international efforts continue to use the Fourth Assessment Report as the standard. In addition, at the time of the completion of the air quality analysis, the Fifth Assessment report (which provides a different estimate of methane:carbon dioxide equivalency) had not been published. Please see the EPA's website at https://www3.epa.gov/climatechange/ghgemissions/gwps.html for more information on global warming potential.
10	The presumption that methane has a global warming potential of 21 is outdated and scientifically unjustified.	Please see response to Comment No. 9.
11	The BLM's estimate of CO2 equivalency associated with methane emissions is clearly flawed…BLM's estimates of total carbon emissions associated with methane releases are four times lower than what they should be.	Please see response to Comment No. 9.
12	The FEIS does not analyze the GHG emission that would result from: the processing of natural gas and refining of oil; the ultimate consumption of oil and natural gas; the transmission and distribution of natural gas; the transportation of oil…and refined products; and the emissions likely to result from the processing of oil and gas into other products.	Please see response to Comments No. 1 and No. 2.

Comment Number	Comment	Response
13	The BLM fails to estimate reasonable foreseeable indirect emissions.	The BLM has provided a comprehensive assessment of the potential impacts associated with near-field, mid-field, and far-field emissions, as well as the greenhouse gas emissions that would occur as a result of the proposed action and no action alternative. The BLM also provides an analysis of the cumulative impacts that would occur as a result of the CD-C and other projects. Table 5.5-1 on page 5.-13 of the FEIS provides an overview of all the projects and land use plan reasonably foreseeable estimates of all emissions. An estimate of indirect effects that would occur as a result of downstream user consumption would be highly speculative and would provide no discernable benefit to the document and would not provide additional pertinent information to the decision maker or the public.
14	The BLM fails to address reasonably foreseeable GHG emissions from cumulative and similar actions.	Please see response to Comment No. 5.
15	The BLM failed to take into account the GHG emissions resulting from other past, present, and reasonably foreseeable oil and gas development in the Wyoming Basin Ecoregion.	Please see response to Comment No. 5.
16	The agency also rejected analyzing and assessing these emissions in the context of their costs to society.	Please see response to Comment No. 4.
17	The BLM has also utilized the social cost of carbon protocol in the context of oil and gas approvals (Montana EA 0010-2014-0011 May 2014).	Please see response to Comment No. 4.
18	The requirement to analyze the social cost of carbon is supported by the general requirements of NEPA.	Please see response to Comment No. 4. Additionally, there is no requirement to include social cost of carbon as part of a NEPA analysis.

Comment Number	Comment	Response
19	The BLM rejected the notion that analyzing climate impacts was even possible, implicitly concluding that there would be no climate impacts and no climate costs associated with the proposed oil and gas leasing. This renders the EIS fatally flawed and unable to support a well-informed decision under NEPA.	The FEIS acknowledges that climate change is occurring and that the release of greenhouse gases into the atmosphere is contributing to climate change. However, the BLM is unable to estimate the impacts of this project in a global context. The BLM, consistent with CEQ guidance, has estimated the greenhouse gas emissions associated with the proposed action (and the No Action Alternative) as a reasonable proxy for the effects of climate change. The CEQ guidance directs agencies to consider the effects of a proposed action on climate change as indicated by GHG emissions, and consider the implications of climate change for the environmental effect of the proposed action. The FEIS provides this in Section 4.5.7.1 on pages 4-67 and 4-68 of the FEIS for the proposed action, and compares the GHG emissions qualitatively for the action alternatives and also provides a quantitative comparison in Table 4.5-3 on page 4-53. The GHG emissions that would occur as a result of the No Action alternative are presented in Section 4.5.7.6, page 4-78. Section 4.5.7.1, also states that "it is not possible to attribute emissions of GHGs from any particular source to a specific climate impact, globally or regionally, due to the longevity of GHGs in the atmosphere."
20	We are highlighting how carbon costs shed important light on the significant of the climate impacts of the CD-C project and how the BLM's failure to analyze and assess carbon costs renders the FEIS flawed.	Please see response to Comment No. 4.
21	The statement that the project would be largely infill is a false statement.	There are over 4,000 existing wells within the project area, the development of which were analyzed under the Creston Blue Gap and Continental Divide/Wamsutter II Environmental Impact Statements. The majority of future development is likely to occur within areas already heavily impacted, in the higher potential areas described in the EIS. This is an infill project as there already exists infrastructure, including pipelines, roads, and ancillary facilities to support additional development. Future activity in the project area would be a continuation of activity that has been ongoing in the area since the 1940s.

Comment Number	Comment	Response
22	Approximately 63% of the CD-C's 1.1 millions acres currently have little or no surface disturbance at present, while about 37% of the project area has moderate or heavy levels of development.	There are over 4,000 existing wells within the project area, the development of which were analyzed under the Creston Blue Gap and Continental Divide/Wamsutter II Environmental Impact Statements. The majority of future development is likely to occur within areas already heavily impacted, in the higher potential areas described in the EIS. This is an infill project as there already exists infrastructure, including pipelines, roads, and ancillary facilities to support additional development. Future activity in the project area would be a continuation of activity that has been ongoing in the area since the 1940s. Regardless of the current state of surface disturbance on some of the sections within the project area, the proposed project is infill development in an area already heavily impacted by development. As described in Appendix B of the FEIS, the proponents propose to develop natural gas-resources within the existing fields that were analyzed within the CBG and CD/WII EISs. In addition, the proposed action states that existing arterial roads will provide the main access to the project area, and new roads are expected to consist primarily of short access roads, building off of existing arterial roads and existing disturbance.
23	BLM has no intention of mapping out the locations of the project road network and instead intends to analyze road network site specific impacts at the APD stage (referencing Appendix B).	Appendix B is the Operators' proposed project description (action), and provides the foundation for the development of alternatives to the proposed action. Appendix B is not a BLM-generated document and as such, no inferences should be drawn based on what is provided in Appendix B of the FEIS. However, the programmatic nature of this project does not enable the BLM to determine the future locations of wellpads, roads, or ancillary facilities. Future locations of development within the CD-C project area will depend on site-specific information such as geology, topography, existing road infrastructure, and other factors. Due to the size of the project area as well as the numerous operators within the field, the BLM is unable to project the exact locations of proposed development with any accuracy and to do so would not provide the decision maker with any additional pertinent information. When individual APDs or ROW applications are received, site-specific NEPA analysis will occur and will consider the existing transportation network, resource impacts, and other potential resource conflicts at that point. In addition, the Implementation Group identified in the ROD will work with other stakeholders to work towards resolving identified issues, such as transportation.

Comment Number	Comment	Response
24	BLM is explicitly authorizing potentially have oil and gas development in areas currently undeveloped, in direct contradiction to the agency's statement quoted earlier in this paragraph (the historical development in the project area provides an indicator as to the likely spatial distribution and density of future development).	The project area was defined based on previous analyzed projects including the Continental Divide/Wamsutter II and Creston Blue Gap EISs. Current development has occurred in these areas and historical development does provide an indicator as to the likely spatial distribution and density of future development.
25	We are concerned that the density of wellpads permitted under this project will lead to levels of habitat fragmentation that nullify wildlife habitat effectiveness for many species of sensitive wildlife.	The BLM has provided a comprehensive analysis of the potential impacts associated with this project in the FEIS. The impacts to wildlife are disclosed in Section 4.8 and impacts to special status species are presented in Section 4.9. The density of wellpads provided in the decision was designed to reduce the levels of fragmentation associated with natural gas development, and the COAs provided in Attachment 2 of the ROD and the RDFs of the decision are also designed to avoid and minimize impacts to wildlife and sensitive species.
26	The agency preferred alternative does not minimize impacts by setting development limits at 8 wellpads per square mile. If BLM were truly committed to minimizing surface disturbance impacts, then a maximum of one wellpad per square mile section would be applied for additional development in the project area.	A maximum of one wellpad per section was analyzed in Alternative D, the directional drilling alternative. However, it was determined that this alternative was not technologically feasible. The BLM believes that limiting operators to 8 wellpads per square mile responds to concerns received during scoping and on the DEIS, as well as responding to the purpose and need of the project.
27	All powerlines associated with this project should be buried to prevent raptor and corvid perching.	Any power lines proposed as part of this project would be analyzed under a separate NEPA analysis, and any COAs or terms & conditions that are developed as part of that analysis would be applied to the project at that time. The impacts of powerlines are not analyzed in this FEIS because the location, length, and timing of construction of the powerline are unknown at this time. Once a proposal is received by the BLM for a powerline within the CD-C field, site-specific NEPA analysis will begin at that time.

Comment Number	Comment	Response
28	The CD-C FEIS includes no measures to prioritize development outside sage-grouse PHMA and GHMA.	The BLM and proponents are required to adhere to the requirements set forth in the Sage-grouse RMP amendments for Wyoming. The BLM believes that the avoidance and minimization measures contained within the Sage grouse amendments are sufficient for prioritizing development outside of PHMA, due to the restrictions and requirements for net conservation gain (and thus potentially, compensatory mitigation) within PHMA. The prioritization objective from the ARMPA states "Where a Where a proposed fluid mineral development project on an existing lease could adversely affect GRSG populations or habitat, the BLM will work with the lessees, operators, or other project proponents to avoid, reduce and mitigate adverse impacts to the extent compatible with lessees' rights to drill and produce fluid mineral resources. The BLM will work with the lessee, operator, or project proponent in developing an application for permit to drill (APD) for the lease to avoid and minimize impacts to sage-grouse or its habitat and will ensure that the best information about the GRSG and its habitat informs and helps to guide development of such federal leases."
29	The BLM has made no effort to determine critical thresholds for population declines at individual leks within the CD-C area.	The BLM cooperates with the WGFD in annual lek monitoring, which includes leks within the CD-C project area. The thresholds that the BLM will follow for leks in the CD-C project area will be the same as those established in the sage grouse RMP amendment. Please see the adaptive management section of the ARMPA, as well as Appendix D of the ARMPA.
30	It is therefore of critical importance, for BLM to fulfill its hard look mandate under NEPA, to analyze the performance of each lek in the CD-C project area over time in relation to the well density and distance to nearest well in the surrounding habitat.	Please see response to Comment No. 29. In addition, the BLM and FWS believe that the regulatory measures contained with the RMP amendments are sufficient to protect the greater sage-grouse at the population level.
31	The CD-C FEIS completely fails to identify, or provide adequate protections for, sage grouse winter concentration areas.	There are currently no mapped winter concentration areas identified within the CD-C project area. In addition, the BLM will adhere to the requirements of the sage grouse RMP amendments in order to protect greater sage-grouse.
32	BLM cannot assure the public that sage grouse populations living in and around the project area will have the habitat they need to survive the winter.	There are currently no mapped winter concentration areas identified within the CD-C project area. In addition, the BLM will adhere to the requirements of the sage grouse RMP amendments in order to protect greater sage-grouse.

Comment Number	Comment	Response
33	We are concerned that the CD-C project is carrying forward the inadequate and scientifically discredited 0.6 mile lek buffers prescribed for PHMA and 0.25 mile lek buffers prescribed for GHMA in the Wyoming Sage grouse RMP amendment.	The FWS found, in September 2015, that the Greater Sage-Grouse does not warrant protection under the Endangered Species Act. This determination was based on the adoption of regulatory mechanisms by federal and state agencies that would implemented recommended conservation measures. Management of Greater Sage-grouse in the CD-C project area will conform to the ARMPA and the ROD for the Greater Sage-Grouse.
34	For the project area as a whole, the total surface disturbance to date stands at 5.6%, already above the threshold for the state's core area plan.	The disturbance threshold would not be considered at the programmatic level. The majority of the CD-C project is within GHMA, which is not subject to the 5% disturbance cap. Only projects within PHMA would be subject to the 5% disturbance cap. When an application for a project within PHMA is received, the BLM and the WGFD would, at that time and at the site-specific level, calculate the existing disturbance and determine the percentage. It would not be appropriate to consider the overall CD-C proposal for the DDCT.
35	We are concerned that even short term disturbance approved under this project will be long-lasting…the widespread failure of interim reclamation to provide viable wildlife habitat in southwest and south central Wyoming in the context of oil and gas development undercuts the potential to restore acres of initial surface disturbance to usable wildlife habitat.	The BLM believes that its reclamation requirements as established in Onshore Order # 1, BLM Wyoming's reclamation policy, the reclamation requirements of the Rawlins RMP, and the reclamation plan provided as part of the ROD and in the FEIS are sufficient to enable successful reclamation.
36	We are concerned that halogeton and other invasive weeds are a significant problem and will come to dominate interim reclamation and final reclamation areas.	The BLM believes that its reclamation requirements as established in Onshore Order # 1, BLM Wyoming's reclamation policy, the reclamation requirements of the Rawlins RMP, and the reclamation plan provided as part of the ROD and in the FEIS are sufficient to enable successful reclamation. In addition, the IG will work cooperatively to develop solutions for weed infestations when and if they occur.

Comment Number	Comment	Response
37	BLM has failed to make a finding that limiting surface disturbance to 3%...is unreasonable. No action alternative analyzed would limit surface disturbance below this 3% threshold, a NEPA range of alternatives violation.	There was no need to analyze an alternative that examined limiting surface disturbance to 3%. The CD-C EIS analyzed the proposed action relative to the requirements of the sage grouse IMs and the sage-grouse executive order, neither of which proposed limiting surface disturbance to 3% of an area. In addition, no comments received either during scoping or on the DEIS indicated that the BLM should analyze an alternative that limited surface disturbance to 3%. Finally, the ARMPA analyzed limiting disturbance to 3%, therefore, it was not necessary to analyze a 3% disturbance threshold in the CD-C EIS.
38	We are also concerned that BLM has not disclosed the success rate of interim reclamation for the project region.	The current conditions of vegetation within the CD-C project area are disclosed in Section 3.6, Vegetation and 3.18, Range Resources. Existing allotment conditions, which take into account current interim reclamation, is discussed in Section 3.18.2 of the FEIS and acres disturbed is presented in Table 3.18-2.
39	We are concerned that wellpad densities specified in the FEIs exceed thresholds for sage grouse population persistence, in both PHMA and GHMA areas.	The FWS found, in September 2015, that the Greater Sage-Grouse does not warrant protection under the Endangered Species Act. This determination was based on the adoption of regulatory mechanisms by federal and state agencies that would implemented recommended conservation measures. Management of Greater Sage-grouse in the CD-C project area will conform to the ARMPA and the ROD for the Greater Sage-Grouse.
40	Does BLM foresee the state issuing a new spacing order to allow at last 8 downhole well locations per square mile throughout the project area in the future?	Any changes in downhole well spacing is the purview of the State of Wyoming and the BLM will not speculate on future decisions made by the Wyoming Oil and Gas Conservation Commission.
41	The BLM has failed to present detailed analysis on well densities within PHMA, based on reasonably foreseeable developments under the various action alternatives, a NEPA hard look violation.	The management of Greater Sage-Grouse in the CD-C project area will conform to the ARMPA and the ROD for the Greater Sage-Grouse. The goal of the ARMPA is to reduce development and disturbance in crucial habitat for the sage-grouse, and will achieve this through the use of restrictive avoidance and minimization measures. Actions that are proposed within PHMA will conform to the requirements of the ARMPA. Well densities within the CD-C project area are not known at this time, including well densities within PHMA, due to the programmatic nature of this project. When site-specific applications are received by the BLM for development, impacts to PHMA and other resources will be considered at that time in a site-specific NEPA analysis.

Comment Number	Comment	Response
42	The FEIS also fails to take the legally required hard look at impacts by failing to undertake a DDCT analysis for the project as a whole to inform the density of individual wellsites and the percentage of the surface disturbance that is allowable within core area portions of the project area.	The disturbance threshold should not be considered at the project level scale. The majority of the CD-C project is within GHMA, which is not subject to the 5% disturbance cap. Only projects within PHMA would be subject to the 5% disturbance cap. When an application for a project within PHMA is received, the BLM and the WGFD would, at that time and at the site-specific level, calculate the existing disturbance and determine the percentage. It would not be appropriate to consider the overall project for the DDCT. Surface disturbance will be considered, as is appropriate, at the site-specific level.
43	The failure to calculate the allowable surface disturbance inside core area portions of the project area is a glaring omission that undermines the ability of BLM to assess the impact of the action alternatives on these sensitive habitats.	Calculation of the DDCT and allowable disturbance would occur at the site specific analysis level. The BLM cannot predict with any certainty where development may occur in the future, nor can the BLM predict the amount of disturbance that could result from such development. In addition, the DDCT and disturbance is calculated once a project is received for permitting, not prior to receiving a project. When a project is received by the BLM, the DDCT would be completed considering the spatial footprint of that particular project, not before a project is received. The footprint of future projects is unknown at this time, in addition, the BLM could receive a project next year for analysis or may not receive a project in PHMA for ten years, at which time the disturbance in the DDCT area will have changed, either as a result of adjacent landownership activities (i.e. a well permitted on fee land) or the success of interim reclamation on other existing disturbances. The BLM will consider existing disturbance when a permit is received; it would be premature to consider existing disturbance at this time and does not provide useful information for the decision maker.
44	The FEIS also infers that well densities will be allowed to exceed the one pad per square mile and surface disturbance percentages will likewise be allowed to exceed the 5% limit imposed under the Wyoming GRSG RMP Amendment, in cases where compensatory mitigation is undertaken.	The ARMPA encourages development to occur outside of PHMA and core habitats. However, due to valid existing rights, there may be rare instances where disturbance could exceed the thresholds established in the ARMPA. However, in these instances, the BLM will work with the proponent to avoid and minimize impacts as much as reasonably feasible. If there are residual impacts remaining that would be unacceptable (based on site-specific analysis) then the BLM will work with the proponent to develop compensatory mitigation that would be commensurate with the impact.

Comment Number	Comment	Response
45	If additional development would cause exceedances, permission for such additional development should be denied.	Once the BLM has issued a lease to an Operator, the BLM is under contractual obligation to allow development of that lease under the terms of the lease agreement (including lease stipulations), and in accordance with applicable laws and regulations. The BLM can, however, at the site-specific level, consider alternatives that would minimize the impacts to an acceptable level.
46	At minimum, a 3-mile buffer from the lek for timing limitation stipulations should be applied. The same should be applied for disruptive activities. No alternative considers such strong measures, a range of alternatives deficiency that should be addressed in the FEIS.	The FWS found, in September 2015, that the Greater Sage-Grouse does not warrant protection under the Endangered Species Act. This determination was based on the adoption of regulatory mechanisms by federal and state agencies that would implemented recommended conservation measures. Management of Greater Sage-grouse in the CD-C project area will conform to the ARMPA and the ROD for the Greater Sage-Grouse. The ARMPA considered measures that were recommended by the Conservation Objectives Team in an analysis that was considered sufficient by the FWS to make a determination that the proposed measures in the ARMPAs would be sufficient to protect the long term survival of the sage-grouse and that listing under the ESA would not be necessary. Impacts to sage-grouse as a result of the proposed action are considered relative to the protection measures proposed by the State of Wyoming in the Executive Order, as well as the IMs issued by the BLM that affirmed the Governor's strategy.
47	The EIS is ambiguous…as in some spots it states that limits to disruptive activities only apply within 0.25 or 0.6 mile of active leks. What measures will be put in place to enforce these measures? Will BLM gate wellfield access roads?	Impacts to Greater Sage-Grouse habitat will occur in conformance with the ARMPA. The BLM will determine the necessity of gating wellfield access roads based on site-specific assessment of impact in conformance with the Rawlins RMP.
48	We are concerned that noise from the proposed action alternatives will exceed thresholds that cause displacement, disturbance, and population declines for greater sage grouse.	Noise disturbances will be required to be in conformance with those measures identified in the ARMPA.

Comment Number	Comment	Response
49	We are concerned that BLM is failing to take the legally required hard look at impacts to the Wyoming pocket gopher, and that proposed protection measures in the FEIS are inappropriate and/or inadequate.	The FEIS provides information regarding the current status of Wyoming pocket gopher in Section 3.9.2.1 on page 3-119 of the FEIS and impacts are disclosed in Section 4.9.3. Additional site-specific information will be obtained once an application is received via surveys to determine if pocket gopher habitat would be impacted and site-specific mitigation measures may be applied at that time. As the FEIS states, pocket gopher habitat is avoided as much as possible and impacts to the species are not expected to exceed the significance criteria due to the ability of the BLM and proponents to avoid and minimize impacts using appropriate measures.
50	We remain concerned that the protocol specified for identifying and protecting Wyoming pocket gopher habitat within the CD-C project area, because it relies on project proponents' untrained personnel to identify when pocket gopher colonies may be present.	The BLM or BLM-approved biological consultant identify pocket gopher habitat; not the proponent's untrained personnel. Habitat is identified at the site-specific level.
51	We are particularly concerned about the project's potential impacts on blue head sucker, flannel mouth sucker, and round tail chub.	Effects to these sensitive fish species are disclosed in Section 4.9.3. Required design features of the decision include setbacks from Muddy and Bitter Creeks, as well as Red Wash, and the requirement for closed loop drilling within 1/2 mile of these creeks. In addition, the BLM will require proponents to submit stormwater BMP data (see Attachment 3 of this ROD) in order to ensure that BMPs are functioning correctly. Finally, a monitoring plan (Attachment 4 of this ROD) has been developed to monitor impacts to Muddy Creek and Bitter Creek.
52	The preferred alternative…does not address the potential for erosion, runoff, contamination, and/or wastewater disposal at sites farther than 0.25 mile from Muddy Creek.	The BLM, the EPA and the DEQ both consider the setbacks established and the requirements for closed loop drilling to be sufficient to reduce the potential for erosion and runoff contamination. BMPs will also be used to reduce stormwater runoff as well as reduce the potential for other contamination at sites further than 1/4 mile from Muddy Creek. The DEQ states that they "believe the Preferred Alternative provides a good balance of protecting water quality..." and the EPA notes that the BLM has incorporated the EPA's recommendations for setbacks from Muddy Creek, as well as other water sources. The BLM believes that the preferred alternative (the Decision) provides sufficient protection for Muddy Creek by reducing the potential for contamination as well as providing for monitoring of BMP success.

Comment Number	Comment	Response
53	The agency has no concrete plan for the disposal of highly saline water produced in the course of dewatering coal seams, and proposes to punt wastewater disposal to a future NEPA analysis and decision point.	The BLM does not know the locations of where CBM development may occur in the CD-C project or the quantity and quality of produced water associated with potential CBM operations; therefore, it is beyond the ability of the BLM to predict how the Operators' may proposed to dispose of CBM wastewater. Depending on the location of where the CBM is developed, the produced water may be highly saline, or it may be comparable to fresh water. Disposal of water produced as a result of CBM development would be considered under a future NEPA document, as stated in the FEIS due to the inability of the BLM to accurately predict the quantity and quality, as well as potential future disposal methods, of the produced water.
54	The direct discharge of highly saline CBM wastewater would result in potentially catastrophic impacts to native fishes.	The FEIS has disclosed impacts to sensitive fish species in Section 4.9.3, which also states, on page 4-121 of the FEIS, that produced water from the project area would not be discharged into Muddy Creek within the Little Snake River drainage and therefore produced water discharges would not a pose a risk to those sensitive species. The treatment and disposal of CBM produced water, if proposed, will be analyzed under a future NEPA document (see response to Comment No. 53)that would identify appropriate conditions, terms, and mitigation measures to ensure that impacts to native fish are avoided and minimized. All produced water discharge from the project must also comply with applicable State of Wyoming rules and regulations.
55	The appropriate response to these problems is for BLM to require all of the mitigation measures contained in Alt B to reduce sedimentation, salinification, and other impacts to aquatic systems, plus decreasing overall number of wellpads and roads.	The BLM, the EPA and the DEQ both consider the setbacks established and the requirements for closed loop drilling to be sufficient to reduce the potential for erosion and runoff contamination. BMPs will also be used to reduce stormwater runoff as well as reduce the potential for other contamination at sites further than 1/4 mile from Muddy Creek. The DEQ states that they "believe the Preferred Alternative provides a good balance of protecting water quality..." and the EPA notes that the BLM has incorporated the EPA's recommendations for setbacks from Muddy Creek, as well as other water sources. The BLM believes that the preferred alternative (the Decision) provides sufficient protection for Muddy Creek by reducing the potential for contamination as well as providing for monitoring of BMP success.

Comment Number	Comment	Response
56	The surface disturbance, increased erosion of saline soils, and potential for surface disposal of coalbed methane wastewater included in the action alternatives therefore violate the BLM's sensitive species policy, and should not be implemented.	The BLM, the EPA and the DEQ both consider the setbacks established and the requirements for closed loop drilling to be sufficient to reduce the potential for erosion and runoff contamination. BMPs will also be used to reduce stormwater runoff as well as reduce the potential for other contamination at sites further than 1/4 mile from Muddy Creek. The DEQ states that they "believe the Preferred Alternative provides a good balance of protecting water quality..." and the EPA notes that the BLM has incorporated the EPA's recommendations for setbacks from Muddy Creek, as well as other water sources. The BLM believes that the preferred alternative (the Decision) provides sufficient protection for Muddy Creek by reducing the potential for contamination as well as providing for monitoring of BMP success.
57	The FEIS fails to analyze impacts to Chain Lakes WHMA.	The FEIS analyzes the impacts to the Chain Lakes WHMA in various parts of the impact analysis, depending on the resource impacted. Impacts to playas and wetlands within the WHMA, for example, are considered in the Water Resources section of the impact analysis. Impacts to amphibian species are considered in the wildlife section of the FEIS. The BLM believes that it is completed a sufficient analysis to the sensitive habitat within the WHMA, and provides required design features such as closed loop drilling within certain distances of playas within the WHMA.
58	Intensive management in the Chain Lakes WHMA should include preclusion of surface occupancy within all crucial winter ranges and within 5 miles of sage grouse leks.	Management of greater sage-grouse within the CD-C project area will be consistent with the requirements of the ARMPA. Conditions of approval attached to individual authorizations will depend on the site-specific conditions encountered at a particular location, but will also need to be consistent with the Rawlins RMP as well as lease rights granted. Preclusion of surface occupancy in crucial winter ranges (i.e., no surface occupancy) is not a stipulation identified in the Rawlins RMP nor would it be consistent with existing lease rights. The CD-C EIS also does not identify the need for a no surface occupancy requirement on crucial winter range within the project area. The BLM considers the timing limitation stipulations attached to all leases within crucial winter range sufficient. Other site-specific restrictions may be identified at the APD level to protect crucial winter range, and would be consistent with existing lease rights.

Comment Number	Comment	Response
59	BLM must analyze the consequences of a no-fracking alternative. The EIS does not adequately analyze the relatively new and dangerous extraction methods of fracking and horizontal drilling, or the increase seismic risks from such extraction methods.	The possibility of a no-fracking alternative was not identified either during scoping or via comments received on the DEIS and would not meet the purpose and need. Therefore, the BLM has no obligation to consider an additional alternative at this point in the NEPA process. Furthermore, hydraulic fracturing is a process that has been used in the Wamsutter area for over 50 years and is considered necessary for the successful completion of the majority of wells in that field. The BLM acknowledges the recent interest in the association between hydraulic fracturing and the recent increase in earthquakes in the central and eastern U.S and this is addressed in Section 4.4.4.1 on page 4-36 of the FEIS. The USGS studies referenced in the FEIS indicate that hydraulic fracturing and underground disposal of wastewater would not result in earthquakes within the CD-C project area.
60	BLM must fully analyze the public health, environmental justice, and industrialization impacts of these techniques within an EIS for the planning area, or at a minimum, within a supplemental EIS for the project.	The BLM considers and discloses impacts to health and human safety in Sections 4.20 and 5.20 of the FEIS. There are no environmental justice communities within or adjacent to the CD-C project area.
61	BLM [should] defer review of the project until the proposed methane rule is finalized and until BLM updates the Rawlins RMP After full consideration of the impacts of fracking.	When the methane rule is finalized, Operators will be required to comply with the provisions of that rule. There will always be ongoing rule making, policy changes and updates, or other actions that may influence the outcome of an analysis; the BLM cannot put on hold every project that may be affected by such rules and regulations in the expectation that they will be completed in a timeframe that would enable the BLM to incorporate the rules into the analysis. It is noted on page 4-52 of the FEIS that New Source Performance Standards are currently proposed by the EPA that would limit methane emissions; once final, these emissions limits would apply to the sources developed within the CD-C project area.
62	BLM should prepare a supplemental EIS for the project in consideration of significant unexamined impacts from the consequences of new fossil fuel extraction and fracking.	The BLM believes it has prepared a sufficient analysis that discloses the impacts associated with fossil fuel extraction and hydraulic fracturing.

Comment Number	Comment	Response
63	The BLM must re-initiate consultation with the Fish and Wildlife Service.	The BLM has followed the appropriate process for consultation with the Fish and Wildlife Service by submitting a Biological Assessment for consideration and receiving a Biological Opinion in return from the FWS. The BLM believes that the consultation process as conducted for this project has been done in accordance with the law and the Department's policies and does not need to be reinitiated.
64	BLM must consider prohibiting this dangerous practice (fracking) within the Project area to prevent the worst effects of climate change. At a minimum, BLM must defer consideration of the project until a final rule limiting methane waste and pollution is in place.	Hydraulic fracturing is a process that has been used in the Wamsutter area for over 50 years with no identified adverse effects and is considered necessary for the successful completion of the majority of wells in that field. A no-fracking alternative would not meet the purpose and need of the project. When the methane rule is finalized, Operators will be required to comply with the provisions of that rule. There will always be ongoing rule making, policy changes and updates, or other actions that may influence the outcome of an analysis; the BLM cannot put on hold every project that may be affected by such rules and regulations in the expectation that they will be completed in a timeframe that would enable the BLM to incorporate the rules into the analysis. It is noted on page 4-52 of the FEIS that New Source Performance Standards are currently proposed by the EPA that would limit methane emissions; once final, these emissions limits would apply to the sources developed within the CD-C project area.
65	BLM should defer review and approval of the project until its proposed rule to limit methane emissions from oil and gas development is finalized, or else consider a no fracking alternative within a supplemental EIS.	When the methane rule is finalized, Operators will be required to comply with the provisions of that rule. There will always be ongoing rule making, policy changes and updates, or other actions that may influence the outcome of an analysis; the BLM cannot put on hold every project that may be affected by such rules and regulations in the expectation that they will be completed in a timeframe that would enable the BLM to incorporate the rules into the analysis. It is noted on page 4-52 of the FEIS that New Source Performance Standards are currently proposed by the EPA that would limit methane emissions; once final, these emissions limits would apply to the sources developed within the CD-C project area.
66	Analysis of the consequences of [fracking], prior to irrevocable consequences, is therefore required at this project planning stage.	The BLM believes it has provided a sufficient analysis of the effects of hydraulic fracturing. The effects of fracking are considered in the Water Resources section and include potential impacts related to spills, leaks, accidental discharges, groundwater contamination, water usage, and acknowledgement of other potential impacts related to fracking.

Comment Number	Comment	Response
67	The BLM needs to perform its legal obligations to review, analyze, disclose, and avoid and mitigate the impacts of the project, but the FEIS fails to do so here. Further, given the failure of the existing Rawlins RMP to adequately address the impacts of fracking, it would be inappropriate for BLM to proceed with this project without having considered the cumulative impacts of fracking over the entire Rawlins planning area.	The BLM believes it has provided a sufficient analysis of the effects of hydraulic fracturing. The effects of fracking are considered in the Water Resources section and include potential impacts related to spills, leaks, accidental discharges, groundwater contamination, water usage, and acknowledgement of other potential impacts related to fracking.
68	The BLM should suspend consideration of the project until and analyzes and fully discloses these impacts in an amended RMP, or, should it proceed with review of the project, in a supplemental EIS.	The BLM believes it has provided a sufficient analysis of the effects of hydraulic fracturing. The effects of fracking are considered in the Water Resources section and include potential impacts related to spills, leaks, accidental discharges, groundwater contamination, water usage, and acknowledgement of other potential impacts related to fracking.
69	The fact that the project will result in fracking raises several issues that BLM must address: What chemicals will be used; how will BLM ensure the collection and disclosure of that information; what limitations will BLM place on the chemicals used in order to protect public health and the environment; what measures will BLM require to ensure adequate monitoring or water impacts, both during and after drilling; what baseline data is available to ensure that monitoring of impacts can be carried out effectively; how will BLM collect baseline data that is not currently available; what kinds of treatment will be required; what is the potential footprint and impact of the necessary treatment facilities?	The BLM believes it has provided a sufficient analysis of the effects of hydraulic fracturing in the CD-C FEIS. The effects of fracking are considered in the Water Resources section (Section 4.4) and include potential impacts related to spills, leaks, accidental discharges, groundwater contamination, water usage, and acknowledgement of other potential impacts related to fracking. Conditions of Approval that will be applied to every APD permit within the CD-C project area are included in Attachment 2 of this ROD and include provisions for protecting groundwater and reducing the potential for contamination. The State of Wyoming's Oil and Gas Conservation Commission provides the regulatory basis for impacts related to the use of hydraulic fracturing. The FEIS identifies the different types of treatment facilities that may be used at the discretion of the operators for produced water. Operators are required to disclose some of the chemicals used in hydraulic fracturing to the State of Wyoming; other chemicals are considered proprietary and are not available for either the government or public use or knowledge.

Comment Number	Comment	Response
70	BLM should consider the analysis of contaminated surface water as a result of unconventional well stimulation.	The potential for contaminated surface water occurring as a result of development of the CD-C project area is disclosed in Section 4.4 of the FEIS. In addition, the FEIS analyzes impacts associated with accidental spills and leaks. The BLM considers impacts to surface and ground water, as well as to amphibians and fish species.
71	The EIS should evaluate how often accidents can be expected to occur, and the effect of chemical and fluid spills. Such analysis should also include identification of the particular harms faced by communities near oil and gas fields.	Impacts related to health and human safety are disclosed and discussed in Section 4.21. Hazardous material storage and use are heavily regulated by the BLM, the EPA, and the State of Wyoming. The BLM cannot with any accuracy predict how often accidents may be expected to occur, as this would depend on site-specific circumstances. Any attempt to quantify this would be based on unsubstantiated assumptions regarding the quality of Operators' protection plans such as their Spill Protection Control and Countermeasures plans. The effects of spills and leaks on the environment are also considered in various sections, including Sections 4.4 and 4.9.
72	The EIS should examine the risks to human health and the environment associated with on-site chemical and wastewater storage, including risks from natural events and negligent operator practices.	The effects to human health and safety as disclosed in Sections 4.20 and 4.21. For purposes of the analysis, the BLM must assume that all rules and regulations are adhered to and the Operators will not be negligent when it comes to implementing the required rules and regulations in place for protecting human health and safety. Natural events are planned for in the construction of wellpads and ancillary facilities (for example, the construction of berms around tanks).
73	The EIS should study the rates of well casing failures over time and evaluate the likelihood that well casing failures can lead to groundwater contamination.	Groundwater contamination effects are considered in Section 4.4.4.1. For purposes of the analysis, the BLM assumes that all rules and regulations are adhered to and that Operators complete wells in compliance with Onshore Order #2 which require Operators to use state-of-the-art techniques and other proven technologizes such that usable and unusable water are not mixed. The FEIS does acknowledge that improper drilling and casing techniques could result in groundwater contamination and notes that when poor well casing and cementing practices are used the potential for groundwater contamination exists. The BLM is not aware of any well casing failures having occurred in the CD-C project area; thus, this information is not included in the document.

Comment Number	Comment	Response
74	The EIS must consider long-term studies on the potential for fluid migration through newly created subsurface pathways.	The EPA has noted that hydraulic fracturing effects would not extend beyond 500 feet from the well bore (EPA, Underground Injection Control Program: Hydraulic Fracturing of CBM wells report Federal Register, Vol. 67, No. 167). The EPA is currently conducting an industry-wide study that seeks to understand any relationships between hydraulic fracturing and drinking water. No studies related to impacts from hydraulic fracturing have been completed in the CD-C project area and no occurrences of drinking water contaminated by hydraulic fracturing have been recorded. The BLM believes it has considered all the relevant information available on hydraulic fracturing for this FEIS.
75	The EIS must disclose where the potential for [hydraulic fracking] drilling exists.	Hydraulic fracturing is a process that has been used in the Wamsutter area for over 50 years with no adverse effects and is considered necessary for the successful completion of the majority of wells in that field. It should be assumed that all wells within the CD-C project area will undergo hydraulic fracturing at some point.
76	The EIS must evaluate the potential for contamination from each of these disposal methods.	Underground disposal is regulated by the EPA and the State of Wyoming. State and federal laws govern how waste is disposed of and where; the BLM acknowledges this in Section 4.21. In addition, the FEIS discusses how waste would be disposed of. Landfills would not be used for disposal of drilling wastes nor would spreading of drilling/fracking wastes over the land be implemented. Hazardous waste will be disposed of as required in the RCRA regulations and the disposal of hazardous waste is not permitted on BLM lands. Finally, the DEQ's Solid and Hazardous Waste Disposal program is the regulatory authority of hazardous wastes. No radioactive material will be recovered as part of this project and no breaches in underground disposal wells are anticipated. Non-hazardous wastes will be disposed of according to RCRA and CERCLA regulations.
77	Because a NPDES permit is not required for oil and gas operations, it is particularly important that the impact of runoff is considered as part of the NEPA process.	A NPDES/WYPDES permit would be required for Operators if they were to propose to discharge anything into navigable waters of the U.S. In addition, prior to construction, the Operator may be required to submit a Stormwater Pollution Prevention Plan (SWPPP) to the State of Wyoming for stormwater discharges. The FEIS does include an analysis of the effects of runoff and sedimentation on waterways within and adjacent to the project area, as well as the impacts that may occur to sensitive fish and amphibian species.

Comment Number	Comment	Response
78	The EIS must analyze where water will be sourced, how much, and the effects on water sources under different alternatives.	The FEIS discloses that water will be sourced from water wells within the project area that will be permitted by the State Engineer's Office. Depletions as a result of these wells are considered in the groundwater section of the FEIS and concluded that removal by the project is expected to be below the annual recharge of the structural basins underlying the project area, and the anticipated 510 acre feet/year withdrawn from the Wasatch formation would have no measurable effect on the Colorado River. No freshwater sources will be used for well drilling and completions.
79	The EIS should study the potential for oil and gas operations sites in the project area to emit such air toxics and any other pollutants that may pose a risk to human health, paying particular attention to the impacts of air pollution on environmental justice communities.	There are no environmental justice communities within or adjacent to the CD-C project area. The BLM has provided a comprehensive analysis of air quality impacts as a result of this project in Section 4.5 of the FEIS. Air toxics, or Hazardous Air Pollutants (HAPs), were analyzed in the near-field modeling analysis.
80	The EIS should rely on the most up to date information regarding the contribution of oil and gas operations to VOC and air toxics levels.	The BLM has used the most up to date information in the comprehensive air quality analysis presented in Section 4.5 of the FEIS. All VOCs were quantified in the proposed action inventory, modeled as part of the no action and future year photochemical grid modeling simulations. The near-field modeling assessment includes an analysis of air toxics (HAPs).
81	BLM should use air modeling to understand what areas and communities will most likely be affected by air pollution. The EIS should be informed by air modeling to show where the air pollution will flow.	The BLM has used air modeling to analyze the impacts that may occur as a result of the proposed action, in Section 4.5 and supplemented by the AQTSD.
82	BLM cannot ignore the mounting evidence proving that oil and gas operations are a major cause of climate change. The EIS should study all end uses as contributors to climate change.	Please see response to Comments No. 1 and 2.
83	The EIS must weight the no action and no-fracking alternatives' climate change benefits against the impacts of allowing the project.	The BLM has provided a comparison of the climate change effects of the No Action and the Proposed Actions. A no-fracking alternative was not considered in the FEIS. The BLM, consistent with CEQ guidance, has used estimates of greenhouse gases as a proxy for climate change. Please also see response to Comment No. 3.

Comment Number	Comment	Response
84	BLM must consider all potential sources of greenhouse gas emissions.	The BLM does consider all sources of greenhouse gas emissions that may occur within the project area. This is presented in the AQTSD, Section 2.1.6, as well as Appendix H of the AQTSD.
85	BLM Should also perform a full analysis of all gas emissions that contribute to climate change.	The BLM does consider all sources of greenhouse gas emissions that may occur within the project area. This is presented in the AQTSD, Section 2.1.6, as well as Appendix H of the AQTSD.
86	The EIS should calculate the amount of greenhouse gas that will result in an annual basis.	The BLM does consider all sources of greenhouse gas emissions that may occur within the project area. This is presented in the AQTSD, Section 2.1.6, as well as Appendix H of the AQTSD.
87	The EIS should consider the environmental effects of these emissions, resulting from climate disruption's ecological and social effects.	Unsubstantiated assumptions including operational costs, future regulations, process improvements, demand, and other factors would need to be considered when analyzing and assessing the impacts that could occur as a result of greenhouse gas emissions. This information is beyond the ability of the BLM to reasonably foresee and predict. Such an analysis would be highly speculative and would provide no discernable benefit to the document and would not provide additional pertinent information to the decision maker or the public.
88	Leasing and development of unconventional wells could exact extraordinary financial costs to communities and future generations, setting aside the immeasurable loss of irreplaceable natural values that can never be recovered. The EIS must provide an accounting of these potential costs.	The BLM believes that including estimates of the social cost of carbon in its NEPA analysis for this proposed action would not be useful. Estimating the social cost of carbon is challenging as it is intended to model effects at a global scale on the welfare of future generations caused by additional carbon emissions occurring in the present. The BLM believes that including meaningful monetary estimates of the social costs of carbon would not provide additional pertinent information to the decision maker. Given the global nature of climate change, estimating the social cost of carbon would require the analysis of the impact of the project on the global market. Depending on the global demand for natural gas, the net effect of this project may be offset by changes in production in other locations. In order to complete an analysis of social cost of carbon, the BLM would need to incorporate unsubstantiated assumptions about numerous factors that would beyond the ability of the BLM to reasonably foresee and predict.
89	The EIS must quantify the potential cumulative loss of habitat for sensitive species.	The BLM has provided a cumulative impacts assessment for wildlife and sensitive wildlife species in Sections 5.8 and 5.9.

Comment Number	Comment	Response
90	The EIS must take into account the impact of both unpermitted, illegal waste pits as well as those that are regulated.	The FEIS discloses the potential impacts that may occur as a result of the construction of pits. The BLM analysis assumes that all rules and regulations would be adhered to and that no unpermitted pits would occur within the project area.
91	The EIS must fully assess the risk of induced seismicity caused by unconventional oil and gas extraction activities and wastewater injection wells.	The BLM acknowledges the recent interest in the association between hydraulic fracturing and the recent increase in earthquakes in the central and eastern U.S and this is addressed in Section 4.4.4.1 on page 4-36 of the FEIS. The USGS studies referenced in the FEIS indicate that hydraulic fracturing and underground disposal of wastewater would not result in earthquakes within the CD-C project area.
92	The EIS fails to study these public health risks, precluding meaningful review of the proposed action.	The BLM considers health and human safety in Sections 4.20 and 5.20. In addition, the air quality sections (Sections 4.5 and 5.5) discusses the potential impacts natural gas development may have on human health.
93	BLM should include a health impact assessment, or equivalent, of the aggregate impact that unconventional extraction techniques, including fracking, will have on human health and nearby communities.	The BLM considers health and human safety in Sections 4.20 and 5.20. In addition, the air quality sections (Sections 4.5 and 5.5) discusses the potential impacts natural gas development may have on human health.
94	The EIS fails to incorporate a literature review of the harmful effects of each of the chemicals known to be used in fracking and other unconventional oil and gas extraction methods.	Waste and hazardous materials management is discussed in Sections 3.21, 4.21, and 5.21. The FEIS also discloses the potential impacts that may occur as a result of the use of hydraulic fracturing in Section 4.4.
95	The EIS also fails to study the human health and safety impacts of noise pollution, light pollution, and traffic accidents resulting from oil and gas development.	The BLM considers the effects of the project on noise in Section 4.17, and impacts to visual resources and recreation in Section 4.11. Transportation is discussed in Section 4.16. The BLM cannot predict with any certainty what, if any, increase in traffic accidents may occur as a result of this project. Noelle - do we need to say something about the light pollution?
96	The FEIS improperly defers analysis of wastewater disposal associated development of up to 500 coalbed methane wells until later site specific development plans are proposed.	The BLM does not know the locations of where CBM development may occur in the CD-C project; therefore, it is beyond the ability of the BLM to predict how the Operators' may propose to dispose of CBM wastewater. Depending on the location of where the CBM is developed, the produced water may be highly saline, or it may be comparable to fresh water. Disposal of water produced as a result of CBM development would be considered under a future NEPA document, as stated in the FEIS due to the inability of the BLM to accurately predict the quantity and quality, as well as potential future disposal methods, of the produced water.

Comment Number	Comment	Response
97	The EIS provides no explanation for why it cannot obtain site specific development plans from the project proponents at this state, or why such plans are even necessary to assess these risks (CBM).	Due to the programmatic nature of this project, and the numerous operators involved in the project, there is no way for the BLM to obtain site specific development plans at this point. The state of the market may result in no development occurring within the project area. It is unknown at this time where proposed CBM development may occur; therefore, the BLM cannot determine the volume or quality of produced water. The Operators do not know where CBM development may occur. No site specific plans have been developed or furnished at hits point in time. If and when CBM development is planned, the BLM will assess the impacts in an appropriate NEPA document at that time.
98	The BLM's refusal to examine the potential impacts of produced water disposal from CBM development in the Project's EIS violates NEPA.	Due to the programmatic nature of this project, and the numerous operators involved in the project, there is no way for the BLM to obtain site specific development plans at this point. The state of the market may result in no development occurring within the project area. It is unknown at this time where proposed CBM development may occur; therefore, the BLM cannot determine the volume or quality of produced water. The Operators do not know where CBM development may occur. No site specific plans have been developed or furnished at hits point in time. If and when CBM development is planned, the BLM will assess the impacts in an appropriate NEPA document at that time.
99	The EIS must discuss the impacts of greater water depletions and the increased risk of spills and water contamination that could result from horizontal drilling and hydraulic fracturing. BLM must also consult with the Service regarding these potential harms to endangered fish.	The BLM has consulted with the FWS and received the BO attached to the FEIS in response. The FEIS does consider the impacts of depletions and the risks of spills and potential for contamination in waterways (Section 4.4) and fish (Section 4.9).
100	BLM and the Service's review of the Project's water depletion effects on the endangered fish fails to meaningfully evaluate these efforts in light of the environmental baseline; does not take into account the impacts of the enormous water depletion impacts of horizontal drilling; and ignores the impacts of climate change on stream flows within the CRB.	The BLM believes that the analysis provided in the FEIS is sufficient, and the FWS provided their BO which acknowledges the impacts of the depletions and determines that contribution to the Depletion Fund would be sufficient. The project does not propose to use horizontal drilling techniques, please see Appendix B and Appendix L of the FEIS. The ability of the BLM to estimate the effects of climate change on streamflows within the Colorado River Basin is beyond the scope of this EIS.

Comment Number	Comment	Response
101	The EIS's analysis of the water depletion impacts of the project on the Little Snake stream flows and on the endangered fish is also incoherent.	The BLM's analysis of depletion impacts on sensitive fish is provided in Section 4.9 of the FEIS and the FWS used this analysis to make a determination in the BO that contribution to the depletion fund would be sufficient to mitigate for impacts to these sensitive fish species.
102	To the extent the Service's biological opinion's conclusions rest on the EIS's reasoning, the Service's jeopardy determination lacks a rational basis.	The FWS provided the BLM with a Biological Opinion. It is not the BLM's purview to question the validity of the FWS' determinations.
103	The EIS and biological opinion do not consider the full scope of water depletions that may impact stream flows and the endangered fish.	The BLM believes that it has considered the full potential impact of water depletions on sensitive fish in the project area.
104	The EIS contains ample information to estimate the potential drawdown impacts of CBM wells. The water depletion effects of these additional development activities must be considered in the EIS and BO.	The BLM does not know the locations of where CBM development may occur in the CD-C project; therefore, it is beyond the ability of the BLM to predict how the Operators' may proposed to dispose of CBM wastewater. Depending on the location of where the CBM is developed, the produced water may be highly saline, or it may be comparable to fresh water. Disposal of water produced as a result of CBM development would be considered under a future NEPA document, as stated in the FEIS due to the inability of the BLM to accurately predict the quantity and quality, as well as potential future disposal methods, of the produced water.
105	The BLM and the Service must reinitiate consultation on the biological opinion for the project to take into account these climate change effects on the endangered fish.	The BLM has followed the appropriate process for consultation with the Fish and Wildlife Service by submitting a Biological Assessment for consideration and receiving a Biological Opinion in return from the FWS. The BLM believes that the consultation process as conducted for this project has been done in accordance with policy and does not need to be reinitiated.
106	BLM and Service's consultation failed to adequately consider the increased risk of spills and leaks that could result from the Project.	The BLM has disclosed potential impacts to sensitive fish in Section 4.9 of the FEIS. Spills and leaks are also addressed in Section 4.4.
107	BLM's biological assessment also misleadingly states that produced water would not be discharged to surface waters, when the proponents project description explicitly contemplates surface water discharge as a potential disposal method.	If CBM development is proposed, the BLM will analyze the impacts at that time. No produced water would be discharged to surface waters, as it was not analyzed in this EIS. Although the operators proposed action may consider this an option, because it was not analyzed in this EIS, this disposal method would not be permitted as a result of this analysis.

Comment Number	Comment	Response
108	BLM's and the Service's analysis of the project's effects on the endangered fish must also account for the unprecedented sheer volume of chemicals and wastewaters that will be generated by increased hydraulic fracturing in the project area.	The BLM believes it has provided sufficient information regarding impacts to endangered fish in Section 4.9.
109	The TRCP has long advocated for BLM to work more closely with state wildlife agencies to develop land use planning and habitat objectives, especially for big game species.	The WGFD cooperated with the BLM on the development of this EIS, and will continue as a cooperator on the Implementation Group as outlined in this ROD. In addition, WGFD biologists are present at APD-level onsites and participate in the review of site-specific level NEPA in the RFO. The BLM has entered into a Memorandum of Understanding (MOU) with the WGFD (2013) that provides for coordination between the agencies on matters related to oil and gas development.
110	We are concerned the CD-C project and FEIS may deviate from these critically important [sage grouse] protections - using valid and existing rights as the foundation for any such deviations from the directives in the sage-grouse plans.	In rare circumstances, the BLM may be required to permit activity within PHMA and within areas generally protected by the restrictions developed in the ARMPA when valid existing rights occur and there is no way that the BLM or the Proponent to avoid or minimize impacts. In these circumstances, the BLM will work with the proponent to develop appropriate and commensurate compensatory mitigation in order to offset any unacceptable impacts that remain.
111	The CD-C FEIS appears to defer the analysis of how valid existing rights will be integrated with conservation goals and objectives of the already approved Wyoming 9 plan until site specific authorizations - such as drilling permits - are proposed.	The BLM cannot predict with any certainty the location, size, and timing of future actions that may or may not occur within the CD-C project area. There are some valid existing rights that may never be developed within PHMA within the CD-C project area. When such proposals are made, the predictions of the ARMPA will be applied to avoid and minimize disturbance to the sage-grouse. The individual operator proposals and their locations for future oil and gas development within core areas can only be guessed at and no analyzes of hypothetical situations were included in the FEIS.

Comment Number	Comment	Response
112	BLM must determine exactly how to address valid and existing rights while achieving goals for sage grouse conservation and simply cannot wait until the permitting phase of development, at which point we believe it will be too late for a comprehensive, land scape scale view of this problem.	The BLM developed Appendix S, Landscape-Scale Mitigation (now Attachment 6 of the ROD) to outline how the BLM intends to implement the mitigation hierarchy relative to resources that have been identified as having residual impacts that warrant compensatory mitigation as a result of implementation of this project. The individual operator proposals and their locations for future oil and gas development within core areas can only be guessed at and no analyzes of hypothetical situations were included in the FEIS. The BLM will implement the requirements of the ARMPA if and when proposals for development within PHMA or within GHMA adjacent to leks are received.
113	We recommend BLM conduct a comprehensive landscape-scale assessment and strategy with explicit details on how sage grouse conservation goals will be met in the presence of valid and existing rights before proceeding further with the CD-C project implementation.	The BLM developed Appendix S, Landscape-Scale Mitigation (now Attachment 6 of the ROD) to outline how the BLM intends to implement the mitigation hierarchy relative to resources that have been identified as having residual impacts that warrant compensatory mitigation as a result of implementation of this project. The individual operator proposals and their locations for future oil and gas development within core areas can only be guessed at and no analyzes of hypothetical situations were included in the FEIS. The BLM will implement the requirements of the ARMPA if and when proposals for development within PHMA or within GHMA adjacent to leks are received.
114	[the proposed 8 wellpads per section] exceeds the density and disturbance cap provisions in the Wyoming 9 plan - which limits disturbance to one facility per square mile and 5% maximum disturbance of surrounding priority habitat within 4 miles of leks.	Only 15% of the project area is within PHMA/core areas. The 5% disturbance cap only applies to areas of PHMA. The proposed 8 wellpads per section would be authorized only in areas outside of PHMA. Section 2.2.7.9 discusses the management of Greater Sage-grouse that will occur within the CD-C project area, and highlights that the BLM will adhere to the density and disturbance limitations (subject to valid existing rights, as explained in the response to Comment No. 112).
115	The preferred alternative also allows for exceptions that would permit more than 8 well pads to be developed per section. This is unacceptable…and is not only a significant failure to comply with the density of disturbance caps specified in the Wyoming 9-plan, but also, in our view, constitutes undue and unnecessary degradation according to FLPMA.	Only 15% of the project area is within PHMA/core areas. The 5% disturbance cap only applies to areas of PHMA. The proposed 8 wellpads per section would be authorized only in areas outside of PHMA. Section 2.2.7.9 discusses the management of Greater Sage-grouse that will occur within the CD-C project area, and highlights that the BLM will adhere to the density and disturbance limitations (subject to valid existing rights, as explained in the response to Comment No. 112).

Comment Number	Comment	Response
116	the CD-C FEIS should explicitly state the conditions of approval by which BLM can meet the density and disturbance caps for sage-grouse in the presence of valid existing rights in priority habitat to avoid undue and unnecessary degradation of PHMA.	Please see Section 2.2.7.9, Management of Greater Sage-Grouse in the Features Common to All Alternatives section of Chapter 2.
117	The CD-C FEIS should reexamine mitigation options and explicitly state how impacts will be offset at a landscape scale and to achieve no net loss and ultimately net conservation gain of habitat.	Appendix S of the FEIS, Landscape-Scale Mitigation, was developed in order to outline the mitigation hierarchy and the steps the BLM will take to avoid, minimize, and compensate for impacts to sensitive species. This appendix has been incorporated into the ROD as Attachment 6. The BLM is aware the areas identified in Appendix G of the FEIS are largely affected by development. All proposed off-site compensatory mitigation would be required to be commensurate with the impact and durable.
118	We are also concerned about noise level requirements and ambient baseline noise levels to be used and/or measured in regard to sage-grouse impact reduction. We do not believe the current measures outlined in the CD-C FEIS for noise are consistent with current science nor are the baseline ambient values reported in the CD-C FEIS (20-25dBA) correct.	The BLM will adhere to the noise requirements as prescribed in the ARMPA.
119	Private surface owners cannot command the degree of compensation the BLM is seeking as mitigation.	The BLM is not seeking monetary compensation. Following site-specific analysis of impacts, the BLM will determine whether unacceptable residual impacts remain that must be compensated for in a manner that is commensurate with the impact.
120	Mitigation obligations should be the product of a transparent public process.	Future actions that tier to the CD-C FEIS will have site-specific NEPA analysis completed. Any mitigation obligations would be identified as part of the site-specific NEPA and would be completed as a transparent public process.
121	The BLM must disclose its methodology for calculating indirect effects.	The BLM has added language to Appendix S clarifying how indirect effects may be calculated.
122	The BLM must disclose how it will adjust mitigation to account for other factors.	Other factors would be addressed at the site-specific level. These factors would depend on timeliness of the action, the risk of failure, and other things. Without knowing the site-specific conditions, the BLM is not able to account for these factors.

Comment Number	Comment	Response
123	Appendix S requires too many individualized determinations.	The programmatic nature of the CD-C FEIS necessitates the need for site-specific evaluation once APD or ROW applications are received by the BLM. This is not a new or unusual process.
124	The BLM must correct the error in its debit formula.	The BLM will update the formula as new science and information become available and will continue to work the WGFD. Currently the BLM does not believe there is an error in the formula.
125	Appendix S inappropriately interferes with normal business decisions.	The BLM is not attempting to interfere with normal business decisions. As a way of addressing some of the socioeconomic concerns that were raised during the analysis of the CD-C project, the BLM was merely identifying ways in which companies could mitigate potential impacts to local communities and is not implementing those recommendations as part of the decision.
126	The BLM should not require monitoring for the life of the project.	The BLM must ensure that appropriate, commensurate compensatory mitigation is effectively implemented and is successful, as well as durable. The only way to ensure that this occurs is through monitoring. The compensatory mitigation must be effective through the life of the project.
127	The BLM must explain the mechanisms of conservation easements on BLM lands.	The BLM would not propose the use of a conservation easement on BLM-managed lands. Conservation easements on private lands could be proposed by operators as a mechanism for compensatory mitigation.
128	The BLM should revise the mitigation measures related to the biological environment (Appendix C) and Appendix C should be revised to include only feasible mitigation measures.	The mitigation measures in Appendix C of the FEIS are those measures that have been identified through the RMP process and via site-specific NEPA as the mitigation measures most appropriate for impacts associated with oil and gas development within the Rawlins Field Office. These measures have been through multiple reviews by both internal specialists and the public and are not subject for revision at this point. The application of those measures will be decided at a time when a site-specific proposal is received by the BLM; those measures will be applied when deemed necessary to mitigate for impacts. Mitigation measures are designed and applied to respond to identified impacts at the site-specific level and the BLM has no intention of requiring unfeasible mitigation measures.
129	Mitigation decisions must comply with the FACA.	The BLM agrees with this statement and believes that the use of the cooperator Implementation Group does not constitute a violation of FACA.

Comment Number	Comment	Response
130	The BLM must encourage the development of domestic hydrocarbons. The BLM should preserve flexibility for hydrocarbon development.	The BLM does not believe it is precluding the development or reducing flexibility in this FEIS as based on the Proposed Action received by the BLM from the Operators. The development of this EIS was based on the Operator's Project Description (Appendix B of the FEIS).
131	The BLM must acknowledge its limited authority to regulate air quality.	The BLM has responsibility under FLPMA to minimize adverse impacts from its management actions, including impacts to air quality and atmospheric values and to provide for compliance with applicable air quality standards. The BLM does not claim to have regulatory authority over air quality in the state.
132	The BLM should clarify the nature of its mitigation discussion group.	This has been clarified in the ROD as the Implementation Group.
133	The BLM incorrectly suggests…that the impacts of the CD/WII project have been fully constructed.	The BLM believes that CD/WII has been fully constructed through the allocation of wells from the Rock Springs Field Office to the Rawlins Field Office, and via the implementation of the Interim Drilling Program which allowed drilling to continue, on a case-by-case basis, while the BLM was in the process of developing the CD-C EIS.
134	BP is concerned about the BLM's attempt to impose addition mitigation measures on operations within or near wildlife migration routes when…no big game migration corridors have been formally designated.	The BLM is not proposing mitigation measures for operations within or near wildlife migration routes.
135	BLM's proposed measures to control fugitive dust are not necessary and will increase operational costs significantly…BLM should work with operators to develop site specific measures when and where necessary.	Appendix P, Fugitive Dust, is designed to assist the BLM and the Operators to control fugitive dust and measures are intended to be applied at the site specific level.

Comment Number	Comment	Response
136	Appendix S was not in the Draft EIS, and is not a logical outgrowth of what was proposed in the Draft EIS.	The BLM is required to implement mitigation, using the mitigation hierarchy as presented in CEQ guidance at 40 CFR 1508.20 . Appendix S (Attachment 6 of the ROD) only provides more detail on how the BLM intends to implement landscape-scale mitigation for this project. The implementation of Appendix S has no bearing on the outcome nor does it impact the ability of the decision-maker to make an informed decision. The BLM will continue to apply mitigation on a site-specific basis. Appendix S only clarifies how the BLM intends to apply mitigation when development proposals are received. Appendix G introduced the concept of landscape-scale mitigation in both the Draft and Final EISs; Appendix S build onto Appendix G and clarified the BLM's mitigation objectives.
137	These conclusions should be reiterated in the ROD to avoid confusion. The ROD should clearly state that when a project meets the GRSG Conservation Measures on Page S-9, no residual impacts remain at the landscape level and no compensatory mitigation is required for local scale disturbances.	Please see changes to Appendix S (Attachment 6).
138	Wild horses are above AML..and thus do not merit any special consideration other than the mandates of the WHBA and the BLM's regulations.	In order to continue to implement the requirements of the WHBA, the BLM feels it is necessary to include wild horses as a resource to be considered in the preferred alternative.
139	The Coalition has commented repeatedly that the BLM must develop a noxious and invasive plant plan to prevent sites from being infested with species such as halogeton and other invasives. Currently, the FEIS lacks such a plan.	The BLM determined that writing a comprehensive weed management plan was unfeasible due to the numerous operators and because it would ultimately be far too generic for effectiveness. The BLM will apply weed management at the site-specific level, as there are standard weed stipulations present in the Rawlins RMP and weed management is also required in the Surface Use Plan as directed by Onshore Order #1. Other policies and regulations direct the management of weeds; it would be redundant to incorporate a weed management plan into the project area's reclamation plan.

Comment Number	Comment	Response
140	The BLM must explain its rationale for adopting the position of the WGFD versus the study produced by Nielson and Sawyer…the BLM should not base its management of public land off of considerations driven by a separate agency's management of wildlife…	The BLM is not basing its management of public off of considerations driven by the WGFD. The BLM uses significance criteria established in the Rawlins RMP to determine the significance of impacts and also considers the input of other cooperating agencies.
141	The Coalition has always maintained and will continue to insist…that Operators must coordinate with local livestock permittees. The BLM must require that no vehicle traffic be allowed on recently reclaimed sites.	The BLM agrees that Operators should work with local livestock permittees and this is coordinated through the local range management specialist. The BLM also agrees that no vehicle traffic should be allowed on recently reclaimed sites; any and all off-road travel beyond casual use is prohibited via the RMP and BLM policy.
142	There is no requirement in the RMP to return a site to a condition better than its pre-disturbance condition. Also, reclamation must be based on the pre-disturbance condition because that site may not be capable of supporting a condition better than its pre-disturbance condition or that of a reference site without significant soil amendments and irrigation tactics.	The BLM is not proposing that sites be returned to better than pre-disturbance conditions.
143	Seed mix should be appropriate for the site and the classification. This will ensure that the scale is site specific within the general classification.	Agreed. The BLM has no intention of requiring the use of seed mixes that would not be effective.
144	BLM defines residual effects in its handbook as those effects remaining after mitigation has been applied to the proposed action or alternative. It appears that the BLM intends the operator mitigate impacts beyond those analyzed by the document, including reasonably foreseeable residual impacts.	The BLM is required to analyze the impacts of a proposed action, and the mitigate for this impacts appropriately. The BLM is aware that residual impacts often remain and the BLM is unable to mitigate for all residual impacts. However, there is a difference between residual impacts that are considered acceptable and those residual impacts that are considered unacceptable and potentially inhibit the achievement of the applicable land use plan's objectives.

Comment Number	Comment	Response
145	NEPA does not require that action be taken to mitigate the adverse effects of major federal actions…Neither does NEPA require a detailed explanation of specific measures which will be employed to mitigate the adverse impacts of a proposed action.	The BLM is required to analyze the impacts of a proposed action, and the mitigate for this impacts appropriately. The BLM is aware that residual impacts often remain and the BLM is unable to mitigate for all residual impacts. However, there is a difference between residual impacts that are considered acceptable and those residual impacts that are considered unacceptable and potentially inhibit the achievement of the applicable land use plan's objectives.
146	The Wyoming EO does not recognize habitat that is more ecologically important or valuable than others and the Coalition rejects any strongholds in sage-grouse habitat above Core Areas or PHMAs.	This comment is beyond the scope of this EIS.
147	Sagebrush fertilization is an ineffective technique and the BLM must consider and disclose the information upon which it relies.	The BLM is proposing the use of sage brush fertilization only as an example of the types of compensatory mitigation that may be implemented. The appropriateness effectiveness of particular compensatory mitigation measures will be evaluated at the site-specific level of analysis and only those measures deemed effective and appropriate for the action would be implemented.
148	Appendix S does not properly disclose the benefits of treating Phase III juniper stands.	If treating Phase III juniper stands is proposed, the BLM will adequately assess the benefits and disclose the impacts in a separate environmental analysis at that time.
149	The effectiveness of [centralized well pad production facilities] is site-specific and should be determined as such…some flexibility needs to be allowed and centralization of facilities and the use of multi-well pads cannot be applied unilaterally across a field, but only on a case-by-case, site specific basis.	The BLM would analyze these at the site-specific level.
150	Electrical grid power in the field is uncommon and extremely variable…buried power lines are expensive…overhead power lines create a myriad of visibility and wildlife issues.	If the BLM receives a proposal for an overhead electrical facility, a site-specific NEPA analysis will be conducted at that time.

Comment Number	Comment	Response
151	The BLM is not the primary regulatory authority over air quality matters…the BLM… does not have the authority to retroactively require controls on previously approved and constructed well sites.	The BLM has the responsibility to provide for compliance with applicable air quality standards and to mitigate for air quality impacts on public lands associated with new oil and gas facilities. The BLM does not propose to modify the terms and conditions of existing federal leases.
152	BLM offers no justification as to how its multipliers achieve the mitigation standards and why alternative multipliers would be inadequate.	The BLM has revised Appendix S (Attachment 6) to indicate that the formulas presented in the document are only examples of the types of equations that the BLM may use when determining the debits associated with compensatory mitigation. Alternative multipliers may be appropriate when considering site-specific impacts.
153	The resource objectives in the Rawlins RMP and Wyoming GRSG RMP Amendment that the CD-C project could purportedly inhibit are subject to VER…BLM may not condition approval of an APD on compensatory mitigation when the APD would prevent the BLM from achieving objectives in its RMP. Otherwise, the objectives in RMPs would serve to defeat or materially restrain the lessee's right to develop.	The BLM does not intend to condition the approval of a permit in a way that would defeat or materially restrain the lessee's right to develop. This has been acknowledged in the Landscape-Scale Mitigation document in the ROD (Attachment 6).
154	The BLM cannot unilaterally modify the terms of federal oil and gas leases to demand compensatory mitigation in exchange to approving any development on a lease.	The BLM is not proposing to modify the terms of federal leases.
155	Appendix S can be interpreted as requiring compensatory mitigation because of the possibility that core area thresholds will be exceeded, regardless of whether thresholds have actually been exceeded.	The BLM has attempted to clarify this misunderstanding in Attachment 6 of the ROD. The BLM will determine at the site-specific level if thresholds are exceeded and will not just assume that there is a possibility of core are thresholds being exceeded. The need for compensatory mitigation will be identified at the site-specific level, when and if applications are received and environmental analysis identifies that compensatory mitigation is necessary.

Comment Number	Comment	Response
156	Central to [our] concerns is the fact that Appendix S does not adhere to a foundational premise: if an operator implements mitigation measures that effectively avoid and minimize project impacts as described in Appendix S, Section D, then compensatory mitigation cannot and should not be required.	The BLM has attempted to clarify this in Attachment 6 of the ROD. The BLM will implement the mitigation hierarchy and recognize Operators' attempts to avoid and minimize impacts prior to identifying the need for compensatory mitigation.
157	In the event that BLM chooses to ignore the State of Wyoming's approach, it must permit SRC to calibrate the number of credits in a manner that equates to the debit formula deployed by the BLM, consistent with the USFWS admonition that credit and debit calculations should be generally equivalent.	The BLM does not propose to dictate to the operators how debits should be offset. The BLM does not serve as a crediting agency. The equivalency of debits and credits will be incorporated into the site-specific NEPA analysis as it pertains to determining if compensatory mitigation is appropriate and commensurate to the impact.
158	Given the high standard that banks and other compensatory mitigation must meet to become certified in Wyoming, the insertion of the CD-C Discussion Group into the compensatory mitigation review and approval process is not necessary and potentially harmful.	The BLM has clarified the role of the Implementation Group. This Implementation Group will not be involved in the approval process for mitigation mechanisms but rather will be involved in the development and proposal of such mitigation mechanisms, when necessary. The IG would propose mechanisms to the BLM and identify other locations (not conservation banks) where compensatory mitigation could also be effectively implemented.